AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application:

Claims 1-45 (canceled)

Claim 46 (currently amended): A method of copying a copy protected optical disc, the method comprising the steps of:

reading data from an optical disc at a selected level which differs from the user data level, and

writing the data read from said selected level to an optical disc to create a usable copy of a copy protected optical disc,

wherein the data levels at least comprise, from highest to lowest, the user data level, a data frame level, an error corrected level, an interleaved level, and an encoded data level, and wherein the data is ~~read~~ provided from the optical disc at ~~the error-corrected level without any error-correction codes, or from one of the other levels~~ a level above the encoded data level but below the user data level, and ~~further comprising~~

writing the ~~read~~ provided data to an optical disc, ~~the writing step~~ commencing at a data level which corresponds to the data level from which the data has been provided ~~read~~ and ~~the writing step~~ continuing ~~down~~ through the data levels to produce ~~resultant~~ encoded data in the form of a bit stream, which bit stream is written to the optical disc.

Claim 47 (currently amended): A method ~~of copying a copy protected optical disc~~ according to claim 46, further comprising providing ~~reading~~ the data from the error corrected level without any error correction codes, and wherein the writing ~~step involves~~ includes generating error correction codes for the read data.

Claim 48 (currently amended): A method ~~of copying a copy protected optical disc~~ according to claim 47, wherein writing the read data to an optical disc comprises interleaving the read data together with the error correction codes, encoding the interleaved data in accordance with EFM Plus encoding and writing the resultant bit stream to the optical disc.

Claim 49 (currently amended): A method ~~of copying a copy protected optical disc~~ according to claim 46, further comprising providing ~~reading~~ the data from the optical disc at the data frame level.

Claim 50 (currently amended): A method ~~of copying a copy protected optical disc~~ according to claim 49, wherein the data is ~~read~~ provided from the data frame level without any additional codes, and the writing ~~step~~ involves generating additional codes for the read data.

Claim 51 (currently amended): A method ~~of copying a copy protected optical disc~~ according to claim 50, wherein the additional codes generated include sector numbers.

Claim 52 (currently amended): A method ~~of copying a copy protected optical disc~~ according to claim 49, wherein the data is provided ~~read~~ from the data frame level together with any additional codes.

Claim 53 (currently amended): A method ~~of copying a copy protected optical disc~~ according to claim 49, wherein writing the ~~read~~ data to an optical disc comprises scrambling and subsequently error correcting the provided ~~read~~ data together with the additional codes, interleaving the error corrected data, encoding the interleaved data in accordance with EFM Plus encoding and writing the resultant bit stream to the optical disc.

Claim 54 (currently amended): A method ~~of copying a copy protected optical disc~~ according to claim 46, further comprising providing ~~reading~~ the data from the optical disc at the interleaved level.

Claim 55 (currently amended): A method ~~of copying a copy protected optical disc~~ according to claim 46, further comprising ~~the step of~~ creating a Lead-In for the optical disc being written.

Claim 56 (currently amended): A method ~~of copying a copy protected optical disc~~ according to claim 55, wherein the created Lead-In specifies the physical characteristics and/or manufacturing information for the optical disc being written.

Claim 57 (currently amended): A method ~~of copying a copy protected optical disc~~ according to claim 46, wherein the optical disc being written has a Lead-In, and further comprising ~~the step of~~ specifying physical characteristics for the optical disc being written and writing the specified physical characteristics to the Lead-In on the optical disc.

Claim 58 (currently amended): A method ~~of copying a copy protected optical disc~~ according to claim 46, wherein the optical disc being written has a Lead-In, and further comprising ~~the step of~~ specifying manufacturing information for the optical disc being written and writing the specified manufacturing information to the Lead-In on the optical disc.

Claim 59 (currently amended): A method ~~of copying a copy protected optical disc~~ according to claim 46, wherein the optical disc being written has a Lead-In, and further comprising ~~the step of~~ enabling reading and writing of discs using absolute sector addresses, and using the absolute sector addresses to read the entire data in a Lead-In of a copy protected optical disc, and writing the data read from the Lead-In to a Lead-In of the optical disc being written.

Claim 60 (currently amended): A method ~~of copying a copy protected optical disc~~ according to claim 46, further comprising ~~the step of~~ enabling reading and writing of discs using negative relative sector addresses, and using the negative relative sector addresses to read the entire data in a Lead-In of a copy protected optical disc, and writing the data read from the Lead-In to a Lead-In of the optical disc being written.

Claim 61 (currently amended): Apparatus for copying optical discs, ~~the apparatus~~ comprising:

a pickup ~~means to detect~~ which detects the data carried on an optical disc,

a decoder coupled to the pickup and which decodes ~~decoding means for decoding~~ the detected data, ~~de-interleaving means for arranging~~

a de-interleaver coupled to the decoder and which arranges the decoded data into an ECC block, and

an error correction decoder coupled to the de-interleaver and which determines ~~decoding means for determining~~ error corrected data from ~~said~~ the ECC block, and

~~unscrambling means for unscrambling~~ an unscrambler coupled to the error correction decoder and which unscrambles the determined error corrected data and ~~forming~~ forms a data frame, and

the apparatus further ~~comprising means for~~ writing detected data onto an optical disc, ~~the writing means~~ and comprising ~~scrambling means for scrambling:~~

a feedback shift register which scrambles the formed data frame,

an error correction ~~encoding means for encoding~~ encoder coupled to the feedback shift register and which encodes ~~said~~ the data frame to form an ECC block,

a recording frame generator coupled to the error correction encoder and which interleaves ~~interleaving means for interleaving~~ the data in the ECC block,

an encoder coupled to the recording frame generator and which encodes ~~encoding means for encoding~~ the interleaved data, ~~and~~

a mastering ~~means for representing~~ portion which represents the encoded data on an optical disc, and

~~the apparatus further comprising~~ a disc copying program ~~for selecting~~ which selects the detected data from the ECC block, or the determined error corrected data, or the data frame and ~~for applying~~ applies the selected data ~~to the corresponding element of the writing means, that is~~, respectively to the recording frame generator ~~interleaving means, to~~ the error correction encoder ~~encoding means~~, or ~~to the scrambling means~~ the feedback shift register.

Claim 62 (currently amended): Apparatus ~~for copying optical discs~~ according to claim 61, wherein the data is ~~read~~ provided from the data frame without any additional codes, and ~~the means for~~ writing the data to an optical disc comprises ~~means for~~ generating additional codes for the read data to form a data frame for input to said ~~scrambling means~~ feedback shift register.

Claim 63 (currently amended): Apparatus ~~for copying optical discs~~ according to claim 61, wherein ~~said~~ the decoding and encoding ~~means operate~~ are in accordance with EFM Plus encoding, and wherein ~~said~~ the mastering ~~means~~ portion comprises a laser cutter.

Claim 64 (currently amended): ~~Software~~ A computer readable medium storing software or firmware for use with an optical disc drive to enable the copying of optical discs, the software or firmware comprising:

instructions for ~~reading~~ providing data from an optical disc at a selected level which differs from the user data level, and

instructions to write the read data from the selected level to an optical disc to create a copy of the disc,

wherein the data levels at least comprise, from highest to lowest, the user data level, a data frame level, an error corrected level, an interleaved level, and an encoded data level, and wherein the software or firmware further comprises instructions to ~~read~~ provide the data from the

optical disc at ~~the error corrected level without any error correction codes, or from one of the other levels~~ a level above the encoded data level but below the user data level, and

~~wherein the software or firmware further comprises~~ instructions to undertake ~~a~~ writing ~~step to write~~ the ~~read~~ provided data to an optical disc, ~~the instructions causing, the writing step to commence~~ commencing at a data level which corresponds to the data level from which the data has been provided ~~read~~, and the instructions causing the writing ~~step~~ to continue ~~down~~ through the data levels to produce ~~resultant~~ encoded data in the form of a bit stream, and to write the ~~resultant~~ bit stream to the optical disc.

Claim 65 (currently amended): ~~Software or firmware~~ A computer readable medium according to claim 64, further comprising instructions to ~~read~~ provide the data from the error corrected level without any error correction codes, and instructions to include in the writing ~~step~~ the generation of error correction codes for the read data.

Claim 66 (currently amended): ~~Software or firmware~~ A computer readable medium according to claim 64, wherein the instructions for the writing ~~step~~ comprise instructions to interleave the ~~read~~ provided data together with the error correction codes, to form the interleaved data into physical sectors, to encode the data in the physical sectors in accordance with EFM Plus encoding and to write the resultant bit stream to the optical disc.

Claim 67 (currently amended): ~~Software or firmware~~ A computer readable medium according to claim 64, further comprising instructions to ~~read~~ provide the data from the optical disc at the data frame level.

Claim 68 (currently amended): ~~Software or firmware~~ A computer readable medium according to claim 67, further comprising instructions to ~~read~~ provide the data from the data frame level without any additional codes, and instructions for the writing ~~step~~ to include the generation of additional codes for the read data.

Claim 69 (currently amended): ~~Software or firmware~~ A computer readable medium according to claim 68, further comprising instructions to generate additional codes including sector numbers.

Claim 70 (currently amended): ~~Software or firmware~~ A computer readable medium according to claim 67, further comprising instructions to ~~read~~ provide the data from the data frame level together with any additional codes.

Claim 71 (currently amended): ~~Software or firmware~~ A computer readable medium according to claim 68, wherein the instructions to write the ~~read~~ provided data to an optical disc comprise instructions to scramble and subsequently error correct the ~~read~~ provided data together with the additional codes, to interleave the error corrected data, to form the interleaved data into physical sectors, to encode the data in the physical sectors in accordance with EFM Plus encoding, and to write the resultant bit stream to the optical disc.

Claim 72 (currently amended): ~~Software or firmware~~ A computer readable medium according to claim 64, further comprising instructions to ~~read~~ provide the data from the optical disc at the interleaved level.

Claim 73 (currently amended): ~~Software or firmware~~ A computer readable medium according to claim 64, further comprising instructions to create a Lead-In for the optical disc being written.

Claim 74 (currently amended): ~~Software or firmware~~ A computer readable medium according to claim 73, further comprising instructions to specify in the created Lead-In the physical characteristics and/or manufacturing information for the optical disc being written.

Claim 75 (currently amended): ~~Software or firmware~~ A computer readable medium according to claim 64, further comprising instructions to specify physical characteristics of the optical disc being written and to write the specified physical characteristics to a Lead-In on the optical disc.

Claim 76 (currently amended): ~~Software or firmware~~ A computer readable medium according to claim 64, further comprising instructions to specify manufacturing information for the optical disc being written and to write the specified manufacturing information to a Lead-In on the optical disc.

Claim 77 (currently amended): ~~Software or firmware~~ A computer readable medium according to claim 64, further comprising instructions to enable reading and writing of discs using absolute sector addresses, and to use the absolute sector addresses to read the entire data in a Lead-In of a copy protected optical disc, and to write the data read from the Lead-In to a Lead-In of the optical disc being written.

Claim 78 (currently amended): ~~Software or firmware~~ A computer readable medium according to claim 64, further comprising instructions to enable reading and writing of discs using negative relative sector addresses, to use the negative relative sector addresses to read the entire data in a Lead-In of a copy protected optical disc, and to write the data read from the Lead-In to a Lead-In of the optical disc being written.

Claim 79 (new): An optical disc produced by the method of Claim 46.